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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,545	11/15/2001	Bruno Deltour	216112US2	7361

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,545

Applicant(s)

DELTOUR ET AL.

Examiner

Raymond S. Dean

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 3 and 5 - 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3 and 5 - 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see amendment filed October 3, 2005 with respect to the rejection(s) of claim(s) 1 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art Borth (4,852,090), hereafter Borth.

Borth teaches providing a first part of the information in each time slot as configured to provide synchronization information between stations of the network (Figures 3A, 3B, Column 3 lines 32 – 45, Column 6 lines 43 – 68, Column 7 lines 1 – 13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use synchronization method taught by Borth as an alternative means for synchronization in the system Kroon in view of McGibney thereby creating a TDMA system that allows for transmission over radio channels at transmission rates in excess over those normally allowed by the multipath characteristics of the RF channel as taught by Borth.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3 and 5 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroon et al. (WO 00/18041) in view of McGibney (US 6,594,273) and in further view of Borth (4,852,090).

Regarding Claim 1, Kroon teaches a method of providing sub-channels for transmitting information in a telecommunication network comprising several stations for the transmission of data and speech (Figure 2, Page 5 lines 14 – 15, Page 9 lines 1 – 3, Page 9 lines 6 - 8), wherein the method comprises normally time-multiplexing a data information sub-channel into a first group of time slots and a speech information sub-channel into a second group of time slots to form a frame (Figure 2, Figure 6, Page 9 lines 1 – 3, Page 9 lines 6 – 8, Page 13 line 6, this is a TDMA system in which digital data packets are transmitted, the digital data packets, which can be voice or data, are transmitted at a plurality of different time slots that comprise a TDMA frame, since the digital data packets can be transmitted at a plurality of different time slots and there can be simultaneous transmission of voice and data there will be instants in time when there will be groups of time slots at which data is transmitted and groups of time slots at which voice is transmitted).

Kroon does not specifically teach time-multiplexing a data information sub-channel into a first group of time slots and a speech information sub-channel into a second group of time slots along with providing at least one general services and

synchronization sub-channel time slot to form a frame including the at least one designated general services and synchronization sub-channel time slot in a sequential arrangement with members from of the first and second groups and providing a first part of the information in each sub-channel time slot as configured to provide synchronization information between stations of the network.

McGibney teaches time multiplexing of the data sub-channels with a general services and synchronization sub-channel time slot to form a frame including the at least one designated general services and synchronization sub-channel time slot in a sequential arrangement with the data sub-channels (Column 4 lines 25 – 32).

Kroon and McGibney both teach a wireless TDMA network thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the synchronization sub-channel taught in McGibney in the wireless network of Kroon for the purpose of setting the pace of the TDMA frame for the entire network as taught by McGibney thus enabling all of the terminals in said network to be synchronized for communicating with one another.

Kroon in view of McGibney does not teach providing a first part of the information in each sub-channel time slot as configured to provide synchronization information between stations of the network.

Borth teaches providing a first part of the information in each time slot as configured to provide synchronization information between stations of the network (Figures 3A, 3B, Column 3 lines 32 – 45, Column 6 lines 43 – 68, Column 7 lines 1 – 13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use synchronization method taught by Borth as an alternative means for synchronization in the system Kroon in view of McGibney thereby creating a TDMA system that allows for transmission over radio channels at transmission rates in excess over those normally allowed by the multipath characteristics of the RF channel as taught by Borth.

Regarding Claim 2, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 1. McGibney further teaches providing a link between at least two stations of the network using the general services and synchronization sub-channel; and using the link to perform tasks (Column 4 lines 50 – 58, the terminals in the network are synchronized so that said terminals can perform tasks such as communicating with one another).

Regarding Claim 3, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 2. Kroon further teaches wherein the tasks include transmitting one of a request for priority transmission formulated by a station, a warning reported by a station, a “flash” message, a request for repetition of a message, commands sent out by a master station, and information regarding reconfiguration of the network (Page 16 lines 8 – 13).

Regarding Claim 5, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 1. McGibney further teaches sending a synchronization signal from a master station of the network on the general

services and synchronization sub-channel (Column 1 lines 48 – 51, Column 4 lines 55 – 58, the active terminal is the master terminal).

Regarding Claim 6, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 1. Kroon further teaches transmitting information using a sub-channel for information that would normally be transmitted on another sub-channel (Page 5 lines 12 – 13, Page 16 lines 2 – 5, the control channel can also be a data channel that can transmit the same data that is transmitted on another data channel).

Regarding Claim 7, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 1. Kroon further teaches implementing an anti-collision procedure when there are several simultaneous or almost simultaneous requests for use of the data information or speech information sub-channel (Page 9 lines 19 – 29, Page 10 lines 1 – 9).

Regarding Claim 8, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 7. Kroon further teaches wherein the anti-collision process comprises: assigning a random number to each requesting station; the station with the lowest number obtaining a right to transmit first; and other stations obtaining a right to transmit in an order corresponding to a rising order of the random numbers that have been assigned to them (Page 10 lines 20 – 26, Page 16 lines 8 – 13, the priority status of the terminals are based on their randomly chosen mini/sub slots).

Regarding Claim 9, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 7. Kroon further teaches governing the anti-collision process by a rotating rule of priority (Page 16 lines 8 – 13).

Regarding Claim 10, Kroon in view of McGibney and in further view of Borth teaches all of the claimed limitations recited in Claim 9. Kroon further teaches making simultaneous use of both the data information sub-channel and the speech information sub-channel by a first station, and the first station releasing the required sub-channel when another station requires use the required sub-channel (Page 9 lines 1 – 3, Page 9 lines 6 – 8, Page 13 lines 6 – 13, Page 15 lines 24 – 28, this is a TDMA system which means that there will be frames comprising time slots wherein some of said time slots will be voice time slots and some of said time slots will be data time slots thus both of the voice and data sub-channels can be used simultaneously).

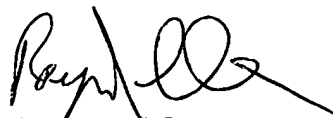
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 6:00-2:30.

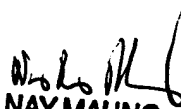
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond S. Dean
November 21, 2005



NAY MAUNG
SUPERVISORY PATENT EXAMINER